

Appl. No. 10/070,197
 Atty. Docket No. AA422
 Amdt. dated 07/02/2004
 Reply to Office Action of 06/04/2003
 Customer No. 27752

REMARKS

Claims 1-11 are pending in this application and all presently stand rejected. Claim 1 has been amended in order to further define the present invention, by the incorporation of the matter of Claim 9, now canceled. Support for this amendment can be found in Claim 9, as originally filed and in the specification, on page 5, lines 24-26.

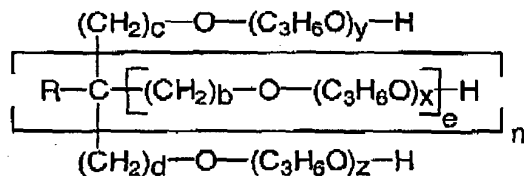
Therefore, reconsideration and withdrawal of the claim rejections under 35 U.S.C. 103 is ask to be considered.

INSTANT INVENTION

The invention in the above-entitled application is directed to a hair care composition includes a polypropylene glycol and a gel matrix. The polypropylene glycol, from about 0.5% to about 10%, is selected from a single-polypropylene glycol-chain segment polymer, a multi-polypropylene glycol-chain segment polymer, and mixtures thereof. The single-polypropylene glycol-chain segment polymer is of the formula:



wherein a is a value from about 20 to about 100. The multi-polypropylene glycol-chain segment polymer is of the formula:



(Formula III),

wherein n is a value from about 0 to about 10, each R is independently selected from the group consisting of H, and C₁-C₃₀ alkyl, each b is independently a value from about 0 to about 2, c and d are independently a value from about 0 to about 2, b + c + d is at least about 2, each e is independently a value of 0 or 1, each x, y, and z is independently a value of from about 7 to about 100, and x + y + z is greater than about 20. The gel matrix includes a cationic surfactant containing one long chain alkyl group and a tertiary or quaternary amine group, a solid fatty compound, and water.

35 U.S.C. § 103

Under 35 U.S.C. §103(a), Claims 1-11 were rejected as being unpatentable over Deckner et al. WO 95/03781 [hereinafter "Deckner et al."]. Applicants respectfully traverses these rejections as applied to Claims 1-11 in view of the arguments presented herein.

Appl. No. 10/070,197
Atty. Docket No. AA422
Amdt. dated 07/02/2004
Reply to Office Action of 06/04/2003
Customer No. 27752

Brief Summary of Deckner et al.

Deckner et al. relates to oil-in-water emulsion compositions that are useful for personal cleansing and for depositing an active ingredient upon the skin surface. The active ingredient in these compositions has a solubility parameter from about 7 to about 13. A preferred active ingredient is salicylic acid.

Examiner's contentions

The Applicants have presented arguments that the unexpected results for the specific combination of components were not achieved through routine experimentation and thus, one of ordinary skill would not have been led to the present invention from any of the disclosure of Deckner et al. The Examiner has asserted that there is ample evidence of record to direct the skilled artisan from the disclosure of Deckner et al. The Examiner further asserted that any unexpected results may need to put in the form of a 132 declaration. Further, the Examiner has asserted that since the prior art teaches a similar composition, one of ordinary skill in the art would thus have been motivated to prepare compositions containing long chain alkyl groups which can be used in the cleaning industry absent a showing of unexpected results or properties.

Applicants have addressed the Examiner's comments above by providing comparative data demonstrating unexpected results in the attached Rule 132 Declaration and will be discussed in more detail below.

1) Unexpected Results

In the enclosed 132 Declaration, Mr. Yang describes tests which were performed to compare conditioning benefit on wet hair for compositions comprising mono-alkyl cationic surfactants compared to conditioning benefit on wet hair for a composition containing di-long alkyl cationic surfactants. A wet hair sensory test assesses slippery or smooth wet hair feel versus a common control in a pair comparison manner (1-5 scale).

The data set forth in Table 1 demonstrates that the level of slippery wet hair feel decreases with increasing distearyldimonium chloride in the combination of behentrimonium chloride and distearyldimonium chloride systems. Furthermore, as stated in the Declaration, a homogenous mixture could not be obtained once the weight ratio of behentrimonium chloride over distearyldimonium chloride reaches 6:4 and beyond. The Declaration states that this is because the di-long alkyl cationic surfactants are too hydrophobic to function as an emulsifier effectively.

In the enclosed 132 Declaration, Mr. Yang further describes tests which were performed to compare flyaway and bulk hair areas measured by an Image Analysis protocol for compositions comprising propylene glycols at different incorporation levels. An Image Analysis measurement measures indexes of flyaway and bulk hair areas compared to flyaway and bulk hair areas of an

Appl. No. 10/070,197
Atty. Docket No. AA422
Amdt. dated 07/02/2004
Reply to Office Action of 06/04/2003
Customer No. 27752

untreated hair. Indexes of flyaway and bulk hair areas measure hair flyaway and bulk volume performance between the values of 1.00 and 0.00. An untreated hair results in an index of 1.00.

The data set forth in Table 2 n demonstrates that the level of hair flyaway and bulk volume reduction increase with increasing PPG-34 weight percentage. The Declaration states that the meaning benefit can be obtained only at a PPG-34 level of greater than 0.25 wt. %.

2) Art Rejections Revisited and Applicant's Arguments

To establish a *prima facie* case of obviousness, under 35 U.S.C. §103, three elements must be met: (a) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; and (b) there must be a reasonable expectation of success; and (c) the prior art reference(s) must teach or suggest all the claim limitations. *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Merck & Co., Inc.*, 231 USPQ 375 (Fed. Cir. 1986); *In re Royka*, 180 USPQ 580 (CCPA 1974). See also, MPEP 2142. Applicant submits that the reference cited by Examiner fails to establish a *prima facie* case of obviousness.

The Examiner states that Deckner et al. discloses a personal care composition comprising a polypropylene glycol, a cationic surfactant, a fatty compound and water; the Examiner specifically pointing out page 10, lines 13-16; page 14, lines 31-34; page 15, lines 18-35; page 26, 24-25, and Examples I, II and IV etc. The Examiner further contends that the instant claims differ from the prior art in claiming a hair composition with the stipulated ingredients whereas the prior art discloses a cleaning composition comprising the claimed formulation and additional ingredients. However, the Examiner asserts that the prior art teaches that the composition can have different uses and additional ingredients (see page 10, lines 14-16). The Examiner further asserts that the applicants use of "comprising", an open-ended word in defining the claims does not preclude the addition of other ingredients into the composition. Further, the Examiner asserts that one of ordinary skill in the art would thus have been motivated to prepare compositions which can be used in the cleaning industry absent a showing of unexpected results or properties. Therefore, the assertion is that the claimed composition of the present application would have been suggested to one of ordinary skill in the art absent a showing of unexpected results.

Applicants respectfully traverse the Examiner's position that the present invention, as now amended, is simply a case wherein one of ordinary skill in the art could simply arrive at the present invention through the prior art disclosure or the mere recitation that Deckner et al can have different uses and additional ingredients (Page 10, lines 14-16).

Specifically, as now amended, the present invention incorporates a cationic surfactant containing one long chain alkyl group and a tertiary or quaternary amine group, in specific combination with from about 0.5% to 10% of a specified polypropylene glycol. Such a cationic

Appl. No. 10/070,197
Atty. Docket No. AA422
Amd. dated 07/02/2004
Reply to Office Action of 06/04/2003
Customer No. 27752

surfactant is distinctly different from the preferred cationic surfactant disclosed in Deckner et al., which discloses a distearyl dimethyl ammonium chloride surfactant (DSDMAC surfactant) and specifically uses the DSDMAC surfactant in the Examples of Deckner et al. Mono-long alkyl cationic surfactants, as now required in the amended instant claims, has been found to provide superior conditioning benefits on wet hair when compared to di-long alkyl cationic surfactants (such as DSDMAC in Deckner et al.), when used in combination with the other required components, such as fatty alcohols and a specified amount of a defined polypropylene glycol.

As demonstrated in the 132 Declaration, the wet conditioning benefit, such as improved spreadability on wet hair is appreciated specifically in hair care, and especially hair conditioning compositions of the present invention. There is no hint or suggestion that compositions as taught by Deckner et al. would provide the wet conditional benefits such as improved spreadability on wet hair. Further, the Examiner has asserted that Deckner discloses not only di-long alkyl surfactant but also mono-long alkyl surfactant, at page 19, lines 19-35. Applicants respectfully assert that the 1.132 Declaration provides the support of the unexpected benefits that have been obtained from the present invention, by the specific combination of the mono-long alkyl surfactant and polypropylene glycol. The mere recitation of a long list of alternative cationic emulsifiers in Deckner et al at page 19, would clearly not lead one to specifically select a mono-long alkyl surfactant in combination with a 0.5% to 10% of a specified polypropylene glycol, and arrive at the unexpected results demonstrated by the data in the 1.132 Declaration. Further, if one of skill in the art would follow the teachings as taught by Deckner et al., they would be lead to the preferred di-long alkyl cationic surfactants, as disclosed and particularly exemplified in Deckner et al. And the 1.132 Declaration demonstrated that that the level of slippery wet feel decreases with increasing distearyldimonium chloride in the combination of behentrimonium chloride and distearyldimonium chloride systems. Furthermore, as stated in the 1.132 Declaration, a homogenous mixture could not been obtained once the weight ratio of behentrimonium chloride over distearyldimonium chloride reaches 6:4 and beyond. The 1.132 Declaration states that this is because that di-long alkyl cationic surfactants are too hydrophobic to function as an emulsifier effectively. Thus, this does not meet the first criteria required to establish a *prima facie* case of obviousness.

Further, Deckner et al does not specifically disclose a hair care composition nor does Deckner et al teach such benefits in a hair care composition. Although the disclosure in Deckner et al. on page 10, lines 14-16 states that it is to be understood that the actives useful herein can in some instances provide more than one therapeutic benefit or operate via more than one mode of action, there is clearly no motivation in Deckner et al., to select specific components among a variety of required/optional components disclosed in Deckner et al., for the use in hair care

Appl. No. 10/070,197
Atty. Docket No. AA422
Amdt. dated 07/02/2004
Reply to Office Action of 06/04/2003
Customer No. 27752

compositions. Further, there is no motivation in Deckner et al. to select mono-long alkyl cationic surfactants among a variety of emulsifiers disclosed, for the specific use in a hair care composition.

Even further, there is no motivation in Deckner et al to specifically combine a mono-long alkyl cationic surfactants in combination with from about 0.5% to about 10% of a specified polypropylene glycol. As demonstrated in the 132 Declaration, the present invention has surprisingly found that the level of hair flyaway and bulk volume reduction increase with increasing PPG-34 weight percentage. And the 132 Declaration further states that the present invention has found that meaning can be obtained only at a PPG-34 level of greater than 0.25 wt %. As stated in the 132 Declaration, the PPG-34 is incorporated in a gel matrix comprising 2.0% of behentrimonium chloride, 2.5 wt% of cetyl alcohol, and 4.5 wt.% of stearyl alcohol. Therefore, as stated above, the unexpected results obtained by the present invention, is demonstrated the defined combination of from about 0.5% to 10% of a specified polypropylene glycol in combination with a mono-long alkyl cationic surfactant.

The unexpected results for the specific components of the present invention were not simply achieved through routine experimentation. Therefore, one of skill in the art would clearly not have been motivated or led to the present invention from any of the disclosure in Deckner et al. Clearly, one of skill in the art would not have been able to merely substitute or add one of the components, with a reasonable expectation of achieving improved results. Further, as mentioned above, other factors must also be evaluated and measured, in order to achieve improved benefits.

Therefore, Applicant has demonstrated that the present invention provides unexpected results over the prior art. Further, Applicants have demonstrated that that all of the criteria has not been met in order to establish a *prima facie* case of obviousness, particularly the elements that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Even if a *prima facie* case has been established, Applicants have overcome the presumption of obviousness by a showing of unexpected results.

Conclusion

In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejection under 103(a). Early and favorable action in the case is respectfully requested.

Applicant has made an earnest effort to place their Claims in proper form, as well as to provide detailed remarks regarding the present invention, in view of Deckner et al. WHEREFORE, Applicant respectfully requests consideration of the amendments and remarks, and allowance of Claims 1-11.

Appl. No. 10/070.197
Atty. Docket No. AA422
Amdt. dated 07/02/2004
Reply to Office Action of 06/04/2003
Customer No. 27752

Respectfully submitted,

Jian-Zhong Yang et al.

By Linda M. Sivik

Linda M. Sivik
Agent for Applicant(s)
Registration No. 44,982
(513) 626-4122

July 2, 2004
Customer No. 27752